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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,981	01/21/2004	Taku Kodama	6453P030	5988

8791 7590 06/06/2005

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EXAMINER	
WANG, JIN CHENG	
ART UNIT	**PAPER NUMBER**
2672	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,981	KODAMA ET AL.	
	Examiner	Art Unit	
	Jin-Cheng Wang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5/24/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/24/2004 has been considered by the examiner.

Specification

The disclosure is objected to because of the following informalities: On line 15 of Page 16, "anda storage unit" should be "and a storage unit". Appropriate correction is required.

Claim Objections

Claim 9 is objected to because of the following informalities: On line 8 of the claim 9, "anda storage unit" should be "and a storage unit". Appropriate correction is required.

Claim Rejections - 35 USC § 112 – First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, and 11-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, Claim 1 recites the limitation of "if regions are fixed in size and an image is not divisible into the regions" is not enabled by the specification because the specification describes that "an image is

not divisible by the tile size", "an image is not divisible by tiles" and "an image is not divisible by the rectangular regions" which is not equivalent and is not consistent to the term "an image is not divisible into the regions" set forth in the claim 1. Although an image is not divisible by the tile size, an image can always be divisible into a number of regions or tiles. However, applicant's claim 1 recites something in contrary that an image is not divisible into the regions. Moreover, the claim 1 recites the claim limitation of "the regions" which is not well defined in the claim and "the regions" cannot be specifically determined. Claims 9, 11, and 12 are subject to the same rationale of rejection as the claim 1. Claim 2-8 depend upon the claim 1 and are rejected due to their dependency on the claim 1. Claims 13-15 depend upon the claim 12 and are rejected due to their dependency on the claim 12.

Claim Rejections - 35 USC § 112 – Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9, and 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, Claim 1 recites the limitation of "if regions are fixed in size and an image is not divisible into the regions" is not enabled by the specification because the specification describes that "an image is not divisible by the tile size", "an image is not divisible by tiles" and "an image is not divisible by the rectangular regions" which is not equivalent and is not consistent to the term "an image is not divisible into the regions" set forth in the claim 1. Although an image is not divisible by the tile size, an image can always be

divisible into a number of regions or tiles. However, applicant's claim 1 recites something in contrary that an image is not divisible into the regions. Moreover, the claim 1 recites the claim limitation of "the regions" which is not well defined in the claim and "the regions" cannot be specifically determined. Moreover, Claim 1 is recites the limitation "the regions" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 9, 11, and 12 are subject to the same rationale of rejection as the claim 1. Claim 2-8 depend upon the claim 1 and are rejected due to their dependency on the claim 1. Claims 13-15 depend upon the claim 12 and are rejected due to their dependency on the claim 12.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Satoh et al. U.S. Patent No. 6,895,120 (hereinafter Satoh).

Re claims 1, 9-12, Satoh discloses a size adjusting unit to, if regions are fixed in size and an image is not divisible by certain tile size, adjust the size of the image at a stage in an encoding process to form a size-adjusted image so that the size-adjusted image becomes divisible into the regions; (*Satoh discloses discloses the new JPEG 2000 decoding standard which utilizes*

transforms and provides a new coding scheme and codestream definition for images in which each image may be divided into rectangular tiles and if there is more than one tile, the tiling of the image creates tile-components and an image may have multiple components and tile components can be extracted and decoded independently of each other; see column 1, line 55 to column 3, lines 7 and column 11, lines 33-65) and

An encoding unit to encode the size-adjusted image by the regions into a codestream (*e.g., column 19, lines 19-36; column 26, lines 16 to column 27, line 33).*

Re claims 2, 13, Satoh further discloses JPEG 2000 codestream or bitstream processed by the JPEG 2000 compliant decoder algorithm (e.g., column 16, lines 55-65, column 28, lines 17-29).

Re Claims 3 and 14, Satoh discloses creating the bit stream compressed image data from these coding passes as grouped in layers contributing to a higher quality image and adding pixels of a predetermined pixel value to the image in the reconstruction of the original image. Satoh further discloses setting zero bitplanes and using extra bits to give more tag tree information in a tile component level partition in JPEG 2000 compliant decoder algorithm (e.g., column 2, 24 and 29-30).

Re Claims 4, 15, Satoh discloses codestream definition for images in which each image may be divided into rectangular tiles wherein the size of the tile is attached to the codestream (column 1, lines 55-67).

Re Claim 5, Satoh discloses after tiling of an image, the tile-components are decomposed into one or more different decomposition levels using a wavelet transformation and these decomposition levels contain a number of subbands populated with coefficients that describe the

horizontal and vertical spatial frequency characteristics of the original tile-components (column 2).

Re Claim 6, Satoh further discloses individual bit-planes of the coefficients in a code-block are entropy coded with three coding passes and each of these coding passes collects contextual information about the bit-plane compressed image data (column 2).

Re Claim 7, Satoh further discloses the codestream relating to a tile, organized in packets, are arranged in one, or more, tile-parts and a tile-part header, comprised of a series of markers and marker segments or tags contains information about the various mechanisms and coding styles that are needed to locate, extract, decode and reconstruct every tile-component. Satoh discloses regouping layers and subbands coefficients and arithmetic coder uses contextual information from previously coded coefficients provided by the bit modeling block about the bit-plane compressed image data and its internal stage to decode a compressed bit stream (column 2).

Re Claim 8, Satoh further discloses that the codestream is quantized by quantization block based on a region of interest and an inverse wavelet transform is applied to the coefficients via transform block followed by DC level shifting resulting in generation of a reconstructed image (column 3).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schwartz U.S. Patent No. 6,549,666.

Schwartz discloses a size adjusting unit to, if regions are fixed in size and an image is not divisible by certain tile size, adjust the size of the image at a stage in an encoding process to form a size-adjusted image so that the size-adjusted image becomes divisible into the regions; (*Schwartz discloses coding units to process an original image and in the decoding process, the original image is divisible into a number of bands and each bands is individually rasterized using display list and each bands is further divided into coding units; column 37, lines 18-55; Schwartz further discloses encoding and reversible color space conversion in which the color space data that is converted may be reversed to obtain all of the existing data leading to lossless compression; see Fig. 34, column 36, lines 33-44; column 39, lines 51-67 and column 40, lines 1-15*) and

An encoding unit to encode the size-adjusted image by the regions into a codestream (*e.g., Schwartz discloses Figs. 3, 10, 34 and 38-39, Schwartz further discloses encoding and reversible color space conversion in the inverse transform in which the color space data that is converted may be reversed to obtain all of the existing data leading to lossless compression; see column 36, lines 33-44; column 39, lines 51-67 and column 40, lines 1-15 and column 12, 19, 22, 23).*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw

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